CLAIMS

A compound binding to leukocytes represented by the formula (1):

$$Z\text{-}Y\text{-}Leu\text{-}Phe\text{-}(X)_n\text{-}Lys(NH_2)_m\text{-}\varepsilon(\text{-}R\text{-}(T)_1\text{-}U) \qquad (1)$$

(wherein, in the formula (1), Z represents a protecting group for an amino group; Y represents Met or Nle; in $(X)_n$, X represents a spacer consisting of one or more of amino acids and/or synthetic organic compounds, and n represents 1 or 0; in $(NH_2)_m$, NH_2 represents an amide group as a protecting group for a carboxyl group in the α position of Lys, and m represents 1 or 0; in ε(-R-$(T)_1$-U), R represents Ser or Thr binding to an ε-amino group of Lys through an amide bond, T represents a spacer consisting of one or more of amino acids and/or synthetic organic compounds, 1 represents 1 or 0, and U represents a group which can be labeled with a metal; with the proviso that said X and T may be the same or different from each other).

2. The compound binding to leukocytes according to claim 1, wherein U in the formula (1) is a group consisting of a peptide represented by -Cys-A1-A2 (A1 and A2 are each an amino acid except for Cys and Pro) which can be labeled with a metal.

3. The compound binding to leukocytes according to claim 1, wherein U in the formula (1) is a group selected from the group consisting of nitrogen-

containing cyclic compounds with 8 to 20 carbon atoms, nitrogen-containing cyclic carboxylic acid compounds with 8 to 20 carbon atoms, derivatives of nitrogen-containing cyclic carboxylic acid compounds with 8 to 20 carbon atoms and alkylenamine carboxylic acids with 4 to 10 carbon atoms, which can be labeled with a metal.

4. The compound binding to leukocytes according to claim 1 or 2, wherein said compound represented by the formula (1) is one selected from the group consisting of:

formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH_2)-ε-(-Ser-Cys-Gly-Asn);

formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH_2)-ε-(-Ser-Cys-Asp-Asp);

formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH_2)-ε-(-Ser-Cys-Gly-Asp);

formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH_2)-ε-(-Ser-D-Arg-Asp-Cys-Asp-Asp);

formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH_2)-ε-(-Ser-1,4,8,11-tetraazacyclotetradecane-1,4,8,11-tetraacetic acid);

formyl-Nle-Leu-Phe-Lys(NH_2)-ε-(-Ser-D-Ser-Asn-D-Arg-Cys-Asp-Asp);

formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH_2)-ε-(-Ser-D-Arg-diethylenetriamine pentaacetic acid);

formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH_2)-ε-(-Ser-1,4,8,11-tetraazacyclotetradecane-butyric acid);

formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH_2)-ε-(-Ser-D-Arg-Asp-

1,4,8,11-tetraazacyclotetradecane-butyric acid);
formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH_2)-ε-(-Ser-D-Ser-Asn-1,4,8,11-tetraazacyclotetradecane-butyric acid);
acetyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH_2)-ε-(-Ser-D-Arg-Asp-Cys-Asp-Asp);
carbamyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH_2)-ε-(-Ser-D-Arg-Asp-Cys-Asp-Asp); and
methyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH_2)-ε-(-Ser-D-Arg-Asp-Cys-Asp-Asp).

5. A medicinal composition containing said compound binding to leukocytes according to any one of claims 1 to 4 in labeled state with a radioactive metal or a paramagnetic metal as the active ingredient.

6. The medicinal composition according to claim 5, wherein said radioactive metal is Tc-99m, In-111 or Ga-67.

7. The medicinal composition according to claim 6, wherein said composition is used in SPECT image diagnosis for imaging a site of vigorous leukocytes infiltration accompanied by immune reaction in an individual.

8. The medicinal composition according to claim 5, wherein said radioactive metal is Cu-64 or Ga-68.

9. The medicinal composition according to claim 8, wherein said composition is used in PET image diagnosis for imaging a site of vigorous leukocytes infiltration accompanied by immune reaction in an individual.

10. The medicinal composition according to claim 5, wherein said paramagnetic metal is Gd, Fe, Mn or Cu.

11. The medicinal composition according to claim 10, wherein said composition is used in MRI image diagnosis for imaging a site of vigorous leukocytes infiltration accompanied by immune reaction in an individual.

12. The medicinal composition according to claim 5, wherein said radioactive metal is Y-90, Sn-117m, Sm-153, Re-186 or Re-188.

13. The medicinal composition according to claim 12, wherein said composition is used for the radiotherapy.